

WHAT IS CLAIMED IS:

1. A dual use vehicle for monorail and roadway travel comprising:

a carriage body having a track engagement slot  
5 formed to engage a triangular rail;

the carriage body including a linear motor component operable to cooperate with the triangular rail to form a linear motor operable to selectively transport the carriage body along the triangular rail; and

10 a modular power module operable to selectively engage the track engagement slot of the carriage body when disengaged from the rail, the modular power module operable to provide power to the carriage body for roadway travel when disengaged from the triangular rail.

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2. The vehicle of Claim 1 wherein the track engagement portion further comprises a longitudinal slot having a generally triangular cross section.

3. The vehicle of Claim 1 wherein the modular power component comprises:

a triangular exterior housing sized to fit within the track engagement slot;

5 at least one energy storage module disposed within the triangular housing;

a control module associated with the at least one battery;

a pavement drive motor associated with electric control module and operable to receive power from at least one energy storage module; and

at least one rear wheel assembly operable to be driven by the pavement drive module.

15 4. The vehicle of Claim 1 further comprising an active suspension associated with the vehicle operable to reduce predetermined acceleration effects during rail operation.

20 5. The vehicle of Claim 1 further comprising the carriage body having a generally circular cross section.

6. The vehicle of Claim 1 further comprising the carriage body having an interior compartment for housing an operator.

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7. The vehicle of Claim 1 further comprising the carriage body generally having a shape generally corresponding to a Class C airship hull having a longitudinal portion removed to form the track engagement slot and a front axle and wheel assembly extending from a front portion of the carriage body.

8. The vehicle of Claim 1 further comprising the track engagement slot operable to partially engage each side of the triangular track.

9. The vehicle of Claim 8 further comprising a brake assembly operable to apply braking pressure to each side of the triangular track.

10. A rail system for transporting dual use vehicles comprising:

a network of a plurality of non-interconnected rails, each rail comprising an extruded triangular shell;

5 the rails supported by a plurality of supports, each support having a base and a rail adjustment actuator;

each rail adjustment actuator operable to selectively adjust the position of the rail; and

each rail sized to support a standardized dual use  
10 vehicle adapted for roadway and rail travel.

11. The rail system of Claim 10 further comprising the plurality of non-interconnected rails generally disposed along a perpendicular grid.

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12. The rail system of Claim 10 wherein the non-interconnected rails are aligned in different planes..

13. The rail system of Claim 10 further comprising  
20 the plurality of non-interconnected rails generally disposed along a circular grid.

14. The rail system of Claim 10 wherein each rail comprises a vehicle entry point and a vehicle exit point,  
25 each vehicle entry point operable to regulate entry onto the rail based on vehicle weight.

15. The rail system of Claim 10 wherein each rail comprises vehicle entry point and a vehicle exit point, each vehicle entry point operable to allow each dual use vehicle entering the track to remove a modular power  
5 module associated with each vehicle and each vehicle exit point operable to facilitate the installation of a modular power module into a vehicle exiting the rail.

16. A transportation system comprising:

a plurality of linear rails operable to support dual use vehicles, each rail having an entrance point and an exit point;

5 each vehicle comprising a linear electric motor and a metal wheel assembly for travel along the rails; and

a power module station associated with each rail entrance point and exit point, the power module station associated with each entrance point operable to receive  
10 modular power modules removed from vehicles prior to entrance onto the associated rail and the power module station associated with each exit point operable to provide a modular power module to vehicles exiting the rail.

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17. The transportation system of Claim 16 further comprising the entrance points operable to determine whether an entering vehicle complies with weight restrictions for operating on the track.

18. A track production vehicle for manufacturing a triangular track for the transport of dual use vehicles comprising:

an all-terrain vehicle base;

5 an extrusion apparatus associated with the vehicle base, the extrusion apparatus operable to form a continuous triangular rail shell; and

a roller assembly proximate the extrusion apparatus operable to selectively form the extruded triangular  
10 shell into a selected shape.

19. The track production vehicle of Claim 18 further comprising the roller assembly operable to form the triangular shell to the selected shaped based on  
15 anticipated weight and shrink effects from rail fill material.

20. The track production vehicle of Claim 18 further comprising the extrusion apparatus and roller  
20 assemblies operable to continuously manufacture a rail shell along a predetermined trajectory.

21. The track production vehicle of Claim 20 further comprising the predetermined trajectory selected  
25 to correspond with a selected rail vehicle passenger heartline trajectory.